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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Stefan Breuer

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

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BRIARCLIFF MANOR, NY 10510

EXAMINER

NAQI, SHARICK

ART UNIT

PAPER NUMBER

3769

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/541,560	Applicant(s) BREUER ET AL.	
	Examiner SHARICK NAQI	Art Unit 3769	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,17 and 20-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,17 and 20-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Examiner acknowledges the Request for Continued Examination (RCE) filed on January 9, 2009.

Note to Applicant Regarding Claim Interpretation

The phrase “configured to” in the claim(s) may be interpreted as intended use. Intended use/functional language does not require that reference specifically teach the intended use of the element. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The Examiner has placed the phrase “configured to” in italics, see below, for those instances where this interpretation applies.

Claim Objections

Claim 23 is objected to because of the following informalities: line 3 of claim 23 states, “communicate digital with the digital external device . . .” which appears to be a typographical error and the Examiner suggests it be corrected to “communicate digitally with the digital external device . . .” Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17, 20 and 24-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claims 20 and 25 recite "a processing unit" (claim 20, line 10 and claim 25, line 11). It is unclear if "unit" is structure, or an algorithm or software. If the unit is an algorithm or software then the term/limitation will be given limited patentable weight because it lacks structure that would be attributed to the apparatus claims. Dependent claims 17, 24 and 26-27 are rejected based on their dependence on the rejected independent claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 3, 17 and 20-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Hunsaker et al. US Patent Number 5,564,108 (hereinafter Hunsaker).

Please note that the rejected claims are presented according to their dependencies and out of numerical order.

3. A method of communicating with a medical device, in which an analog/digital interface is provided to which either an analog sensor or a digital external device can be connected and via which analog measured signals or digital data are transmitted from the sensor or the external device, respectively, to the medical device, the method comprising:

operating the analog/digital interface in a measurement mode when the sensor is connected and in a communication mode when the external device is connected (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Medical device receives sensor data when the sensor probe is connected, this is analog and corresponds to a measurement mode. Medical device receives a software update when the computer is connected, this is digital data and the computer is the external device so this step corresponds to a communication mode);

changing over between the measurement mode and the communication mode automatically depending on whether the sensor or the external device is connected to the analog/digital interface (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Device changes between data monitoring and software receiving functions based on whether the sensor probe or the computer with the software update are connected);

in the communication mode, digitally transmitting a software update from the connected external device into the medical device via the analog/digital interface and

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digitally transmitting data from the medical device to the external device via the analog/digital interface (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Medical device receives a software update when the computer is connected, this is digital data and the computer is the external device so this step corresponds to a communication mode); and

in the measurement mode, transmitting analog signals from the connected sensor into the medical device via the analog/digital interface (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Medical device receives sensor data when the sensor probe is connected, this is analog and corresponds to a measurement mode).

21. The method as claimed in claim 3, further including:

measuring electrical parameters of signals received by the analog/digital interface and switching between the measurement mode and the communication mode in response to the measured electrical parameters (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Device changes between data monitoring and software receiving functions based on whether the sensor probe or the computer with the software update are connected by testing the response to an electronic data inquiry).

22. The method as claimed in claim 21, wherein detecting the electrical parameters includes detecting whether the signals are digital (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Device changes between data monitoring and software receiving functions based on whether the sensor probe or the computer with the software update are connected. This determination is made by testing the response to a data inquiry communication sent to a smart probe that includes a memory device, the inquiry and response involve digital data).

23. The method as claimed in claim 3, further including:
replacing an interface of an existing medical device which is unable to communicate digital with the digital external device with the analog/digital interface in order to provide digital communication between the existing medical device and 5 the digital external device (This step is inherent in Hunsaker because, as explained in the Problem and Solution sections, Hunsaker provides the port interface circuit 106 as an improvement for medical devices).

20. A medical device which receives analog data from sensors in a measurement mode and communicates digitally with a digital external device in a communication mode, the medical device comprising:
an interface (port interface 106) including:

a set of contacts, the contacts being *configured to* receive (1) a plug connected by a lead to the analog sensor, and 2) a plug connected by a lead with the digital external device, the contacts being configured such that the contacts can only connect with one of the analog sensor plug and the digital external device plug at a time (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15); and

a processing unit that detects whether digital or analog data is received and which switches the interface into the communication mode when digital signals are received and into the measurement mode when analog signals are received (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Device changes between data monitoring and software receiving functions based on whether the sensor probe or the computer with the software update are connected. This determination is made by testing the response to a data inquiry communication sent to a smart probe that includes a memory device, the inquiry and response involve digital data).

17. (Currently Amended) The medical device as claimed in claim 20, wherein the interface includes:

a switch which assumes one state in response to receiving the analog sensor plug and another state in response to receiving the digital external device plug (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Device changes between data monitoring

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and software receiving functions based on whether the sensor probe or the computer with the software update are connected. This is inherently equivalent to a software “switch”).

24. The medical device as claimed in claim 20, wherein the processing unit implements a software routine to detect the digital data (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Device changes between data monitoring and software receiving functions based on whether the sensor probe or the computer with the software update are connected. This determination is made by testing to detect a response to a data inquiry communication sent to a smart probe that includes a memory device. The inquiry and response involve digital data).

25. A system for communicating with a medical device, the system comprising:
at least one sensor *configured to* sense bodily functions of a patient and transmit along electrical signals, the sensor being connected with a sensor plug (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Sensor probe 111);

an external digital device *configured to* digitally transmit software updates from the external device to the medical device and to digitally receive data from the medical device via an external digital device plug (Figures 1-2, Abstract, Column 2, lines 30-53,

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column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Software update probe 110); and

the medical device including an interface *configured to* receive analog data from sensors and transmit digital signals to and from the digital external device (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Monitoring system 100 and Port interface circuit 106), the interface comprising:

a set of contacts *configured to* connect with both the analog sensor plug and the external digital device plug one at a time (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Port 107);

a processor unit *configured to* detect whether digital data is being transmitted via the interface, automatically change from an analog measurement mode to a digital communication mode when the digital data is detected (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15 Medical device receives a software update when the computer is connected, this is digital data and the computer is the external device so this step corresponds to a communication mode. Medical device receives sensor data when the sensor probe is connected, this is analog and corresponds to a measurement mode. Device changes between data monitoring and software receiving functions based on whether the sensor probe or the computer with the software update are connected);

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such that in the measurement mode, analog signals are transmitted from a sensor into the medical device and in the communications mode, the digital signals are transmitted to and from the external device (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Medical device receives a software update when the computer is connected, this is digital data and the computer is the external device so this step corresponds to a communication mode. Medical device receives sensor data when the sensor probe is connected, this is analog and corresponds to a measurement mode. Device changes between data monitoring and software receiving functions based on whether the sensor probe or the computer with the software update are connected).

26. The system as claimed in claim 25, wherein the processor unit is programmed with a software routine that detects whether the digital data are being transmitted via the interface (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Device changes between data monitoring and software receiving functions based on whether the sensor probe or the computer with the software update are connected. This determination is made by testing the response to a data inquiry communication sent to a smart probe that includes a memory device. The inquiry and response involve digital data).

27. The system as claimed in claim 25, further including:

a switch controlled by the processing unit to switch the interface between the measurement mode and the communications mode (Figures 1-2, Abstract, Column 2, lines 30-53, column 4, lines 1-24, column 5, lines 61-column 6, line 4, column 7, lines 7-column 8, line 15. Device changes between data monitoring and software receiving functions based on whether the sensor probe or the computer with the software update are connected. This is inherently equivalent to a software "switch").

Response to Arguments

Applicant's arguments with respect to claims 3, 17 and 20-27 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments regarding the Finality of the previous office action were rendered moot by the petition decision and the Request of Continued Examination (RCE).

It is the Examiner's position that the updated rejections presented above in response to the amended claims address the arguments raised by the applicant. Please see the details of the rejection above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHARICK NAQI whose telephone number is (571)272-3041. The examiner can normally be reached on 8:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry M. Johnson III can be reached on 571-272-4768. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. N./

Examiner, Art Unit 3769

/Michael C. Astorino/

Primary Examiner, Art Unit 3769

May 13, 2009